

Force

Write *true* if the statement is true. If the statement is false, **change the underlined term to make the statement true.**

- _____ 1. The weight of an object is a measure of the force of gravity.
- _____ 2. Objects with less mass have more gravity.
- _____ 3. Weight is a force that slows down moving objects.
- _____ 4. Forces equal in size and opposite in direction are called unbalanced forces.
- _____ 5. Balanced forces do not cause a change of motion in an object.
- _____ 6. When unbalanced forces act on an unmoving object, the motion of the object will stay the same.
- _____ 7. As the distance between two objects increases, the force of gravity increases.
- _____ 8. The Newton is the unit of measurement for weight.

The pictures below show a force that is a push or a force that is a pull. Write ***push*** or ***pull*** on the lines under each picture.



1. _____



2. _____



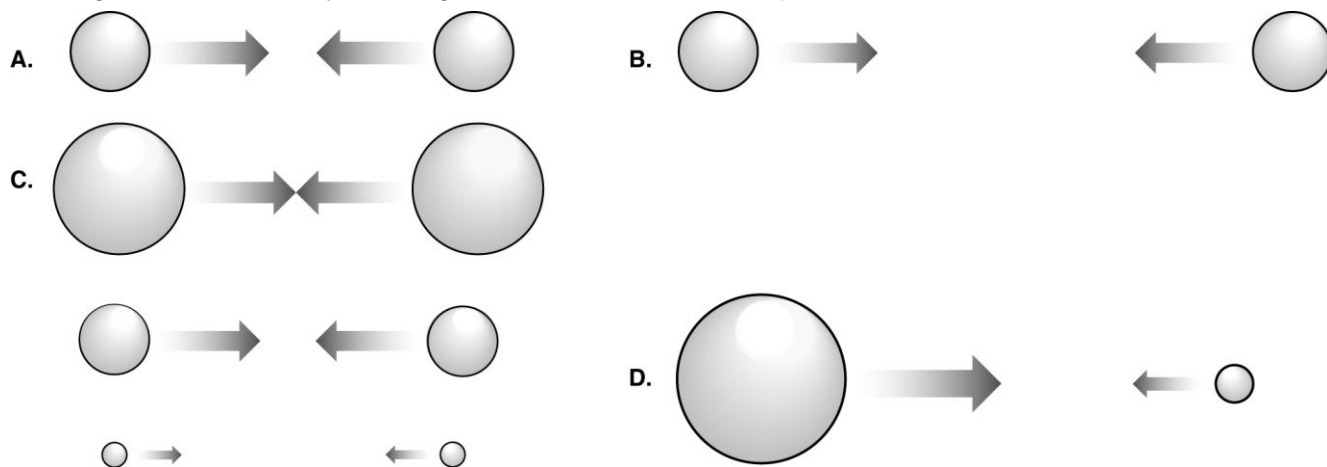
3. _____



4. _____

Gravitational Force

The diagrams below show several important properties of gravitational force. In each picture, the sizes of the arrows are related to the size of the forces between the objects. The larger the size of the object, the larger its mass. Study the diagrams. Then, answer the questions below.



1. Look at Figures A and B. What is the same in both pictures? _____

2. How do Figures A and B differ? _____

3. What important property of gravity is shown in Figures A and B? _____

4. Look at Figure C. How are the three pairs of objects different? _____

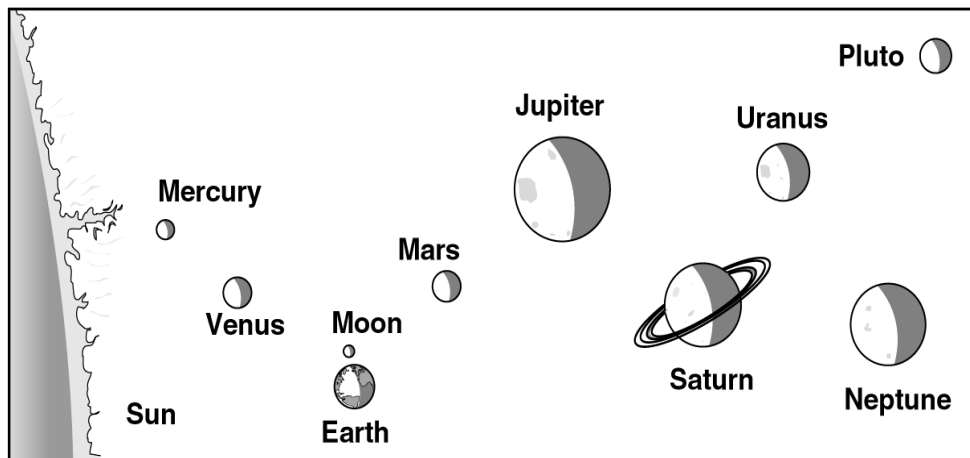
5. What property of gravity is shown in Figure C? _____

6. How do the two objects in Figure D differ from each other? _____

7. What does Figure D tell you about gravity? _____

Gravity

The diagram below shows the Sun and the nine planets in the solar system, including the moon. Use the diagram to answer the following questions.



1. Which body probably has the greatest mass?
2. Which body probably has the smallest mass?
3. Based on your answers to questions 1 and 2, which body has the strongest force of gravity?
4. Based on your answers to questions 1 and 2, which body has the weakest force of gravity?
5. On which body would you weigh the most?
6. On which body would you weigh the least?